

AQMD Background and Regional Air Quality Impacts of Aircraft

February 13, 2007

Aircraft Emissions Control Technology Forum

South Coast Air Quality Management District

The South Coast Air Quality Management District includes all of Orange County and portions of Los Angeles, San Bernardino and Riverside Counties, an area of 10,743 square miles with 16.5 million people and 10 million vehicles.

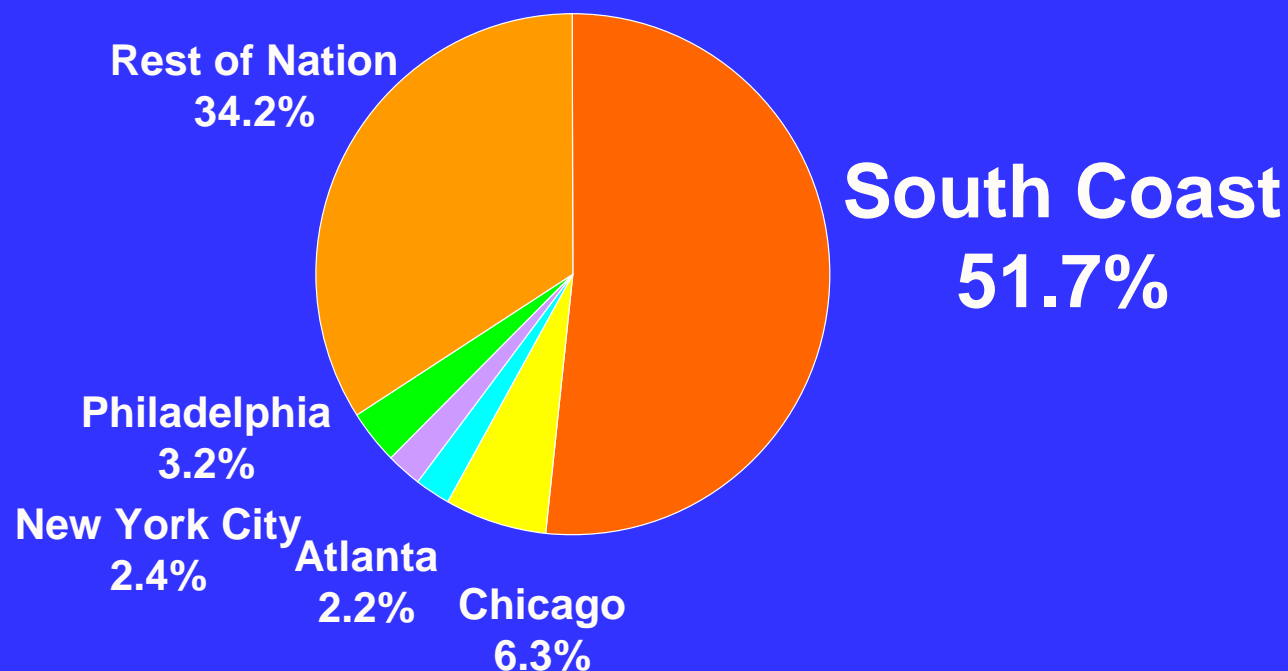


Key Pollutants

- Ozone (summer smog)
 - Building Blocks
 - ⇒ VOC, NO_x
- Fine Particles (PM_{2.5})
 - Building Blocks
 - ⇒ SO_x, PM_{2.5}, NO_x, VOC

SCAB's Disproportionate Air Pollution Exposure

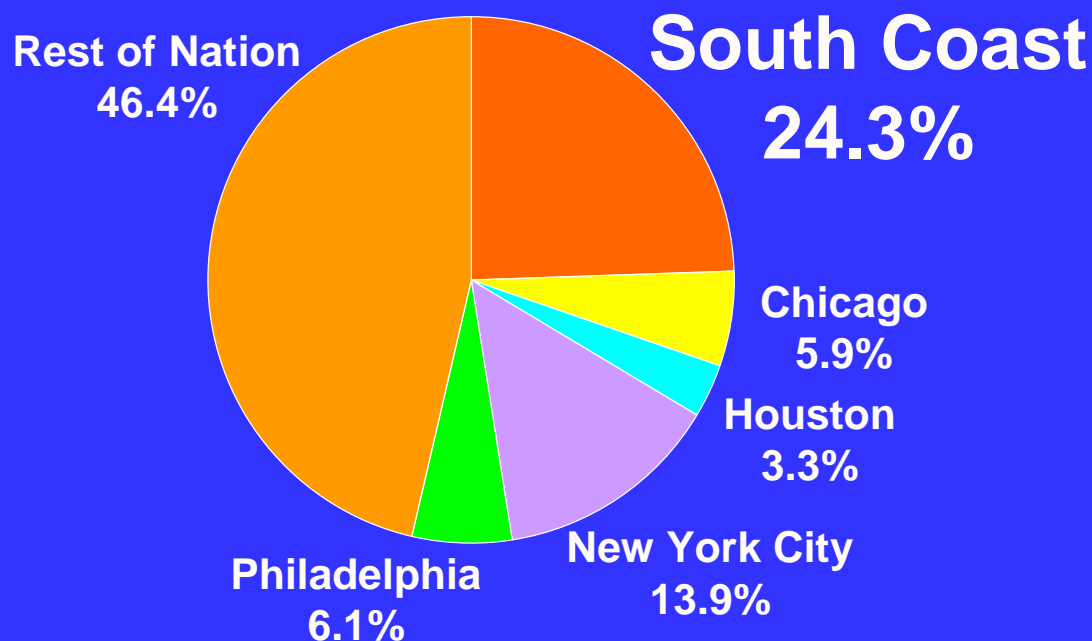
Annual Average PM_{2.5}
(NAAQS = 15 ug/m³)



Population-weighted exposures above the NAAQS, based on 2000-02 AIRS data

SCAB's Disproportionate Air Pollution Exposure

8 Hour Ozone
(NAAQS = 0.08 ppm)



Population-weighted exposures above the NAAQS, based on 2000-02 AIRS data

Recent CARB Health Impact Estimates

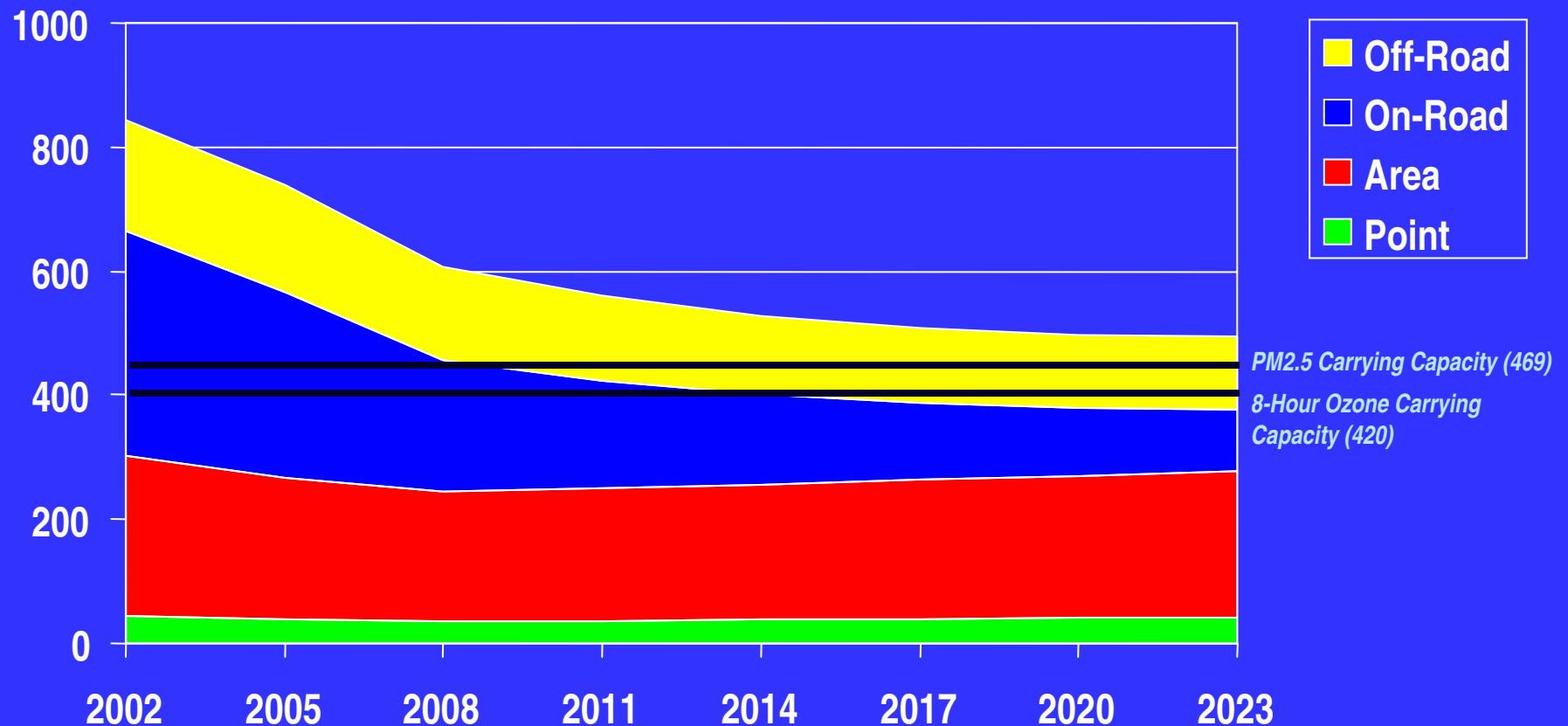
- 6,500 premature deaths / year
 - 2,400 from goods movement
- 9,000 hospitalizations / year
- 1.7 million cases respiratory illness / yr
- 1.3 million school absences
- 2.8 million lost workdays / year

Source: CARB 2004, California Estimates

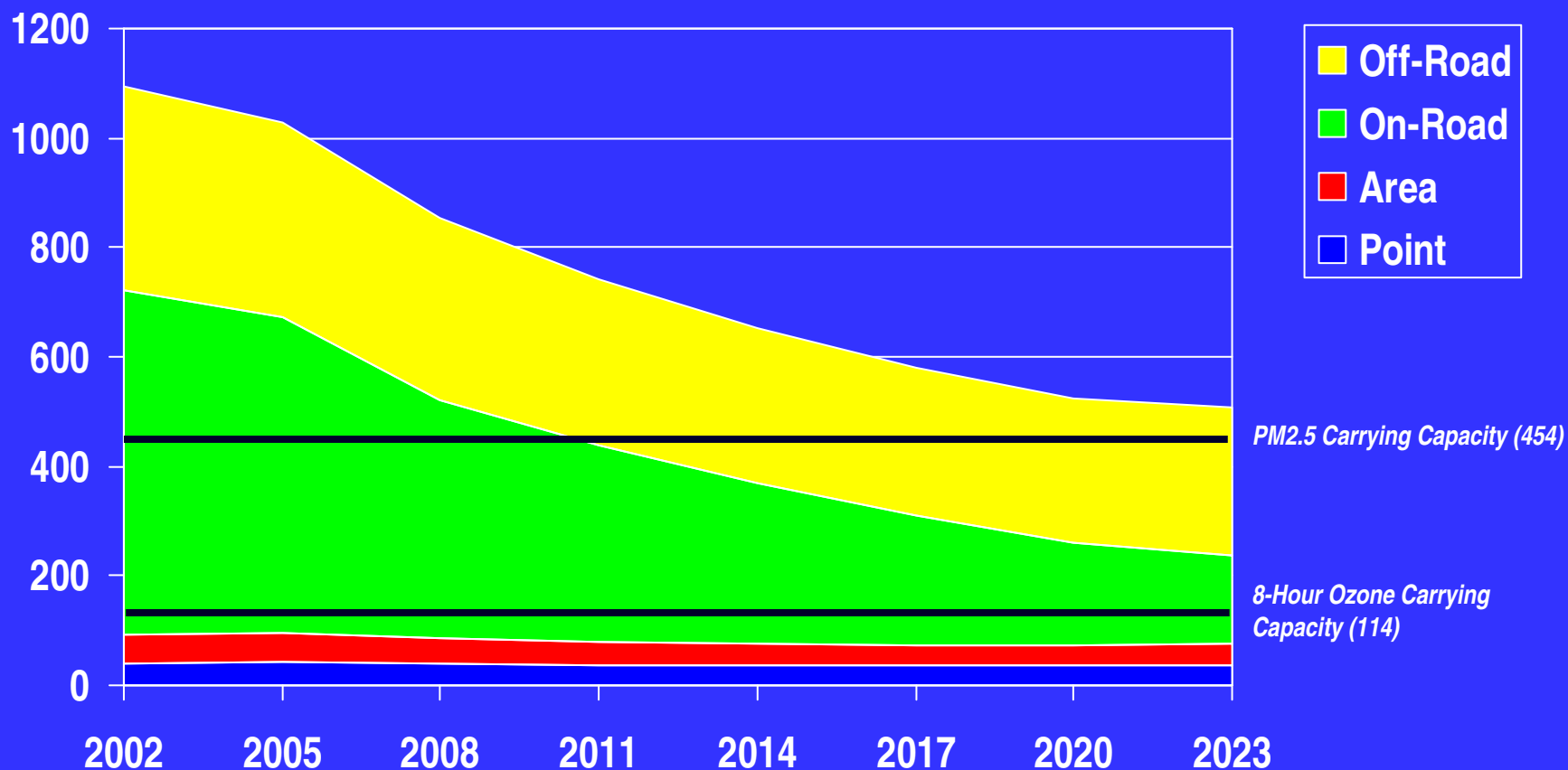
2007 State Implementation Plan

- Regional Blueprint to Meet Air Quality Standards
- Integrated Plan to Address Both PM_{2.5} and 8-hour Ozone Standards
 - PM_{2.5}: 2015
 - 8-Hour ozone: 2024

VOC Emissions Trend By Source Category and Carrying Capacity



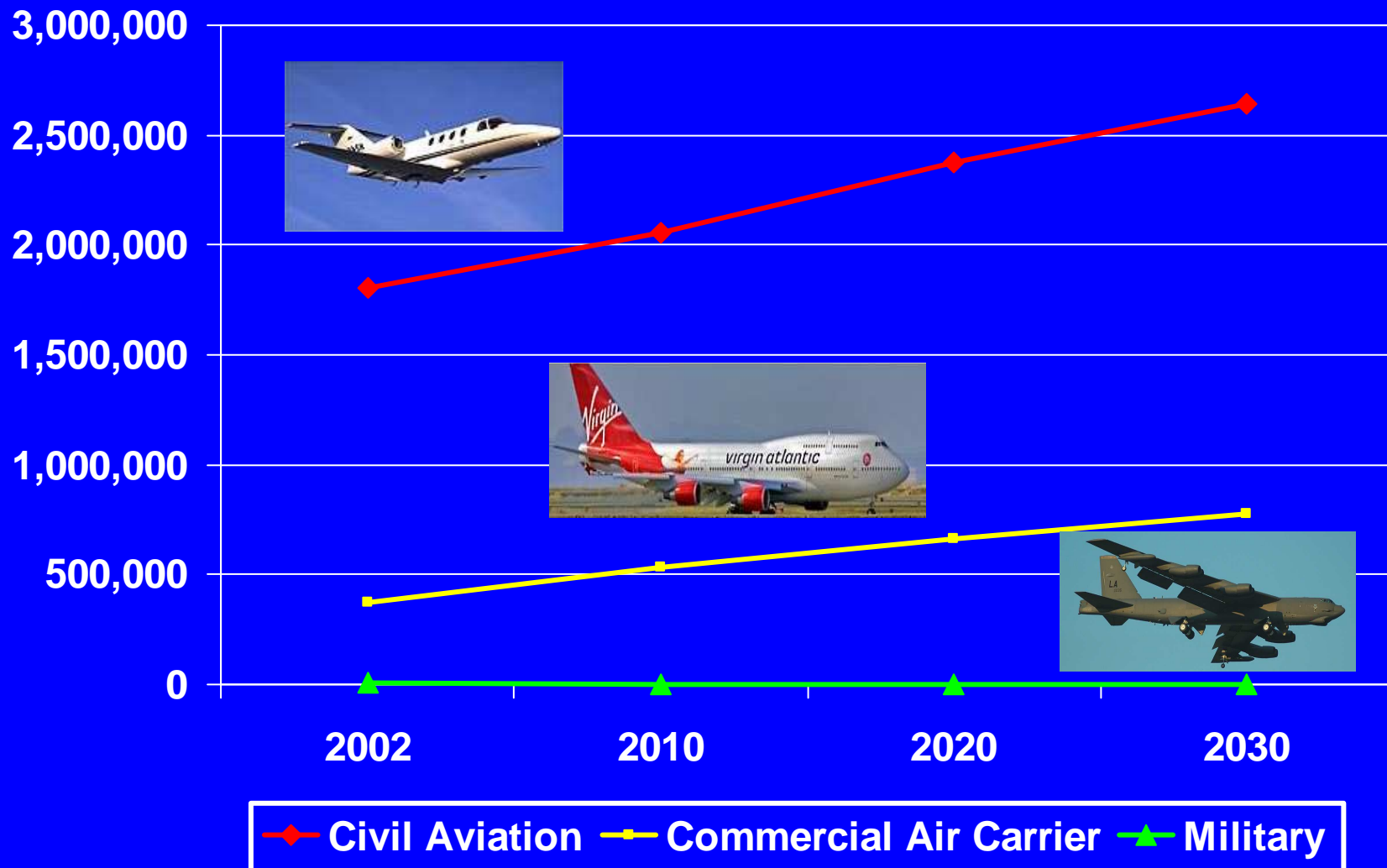
NOx Emissions Trend By Source Category and Carrying Capacity



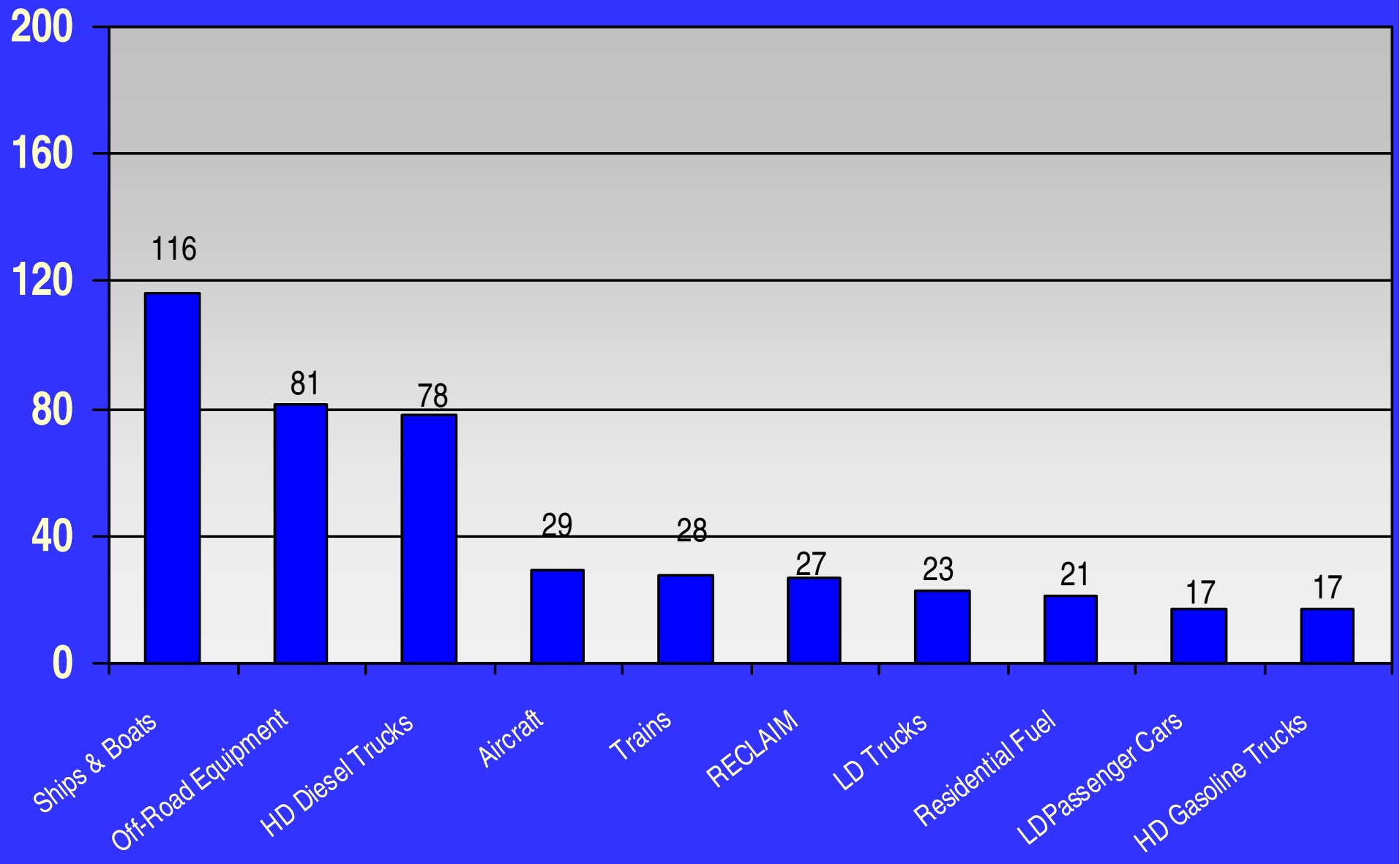
Needed Pollution Reduction (tons per day)

	2014	2023
NOx	192 (29%)	383 (76%)
VOC	57 (11%)	116 (22%)
SOx	23 (54%)	---
PM2.5	14 (14%)	---

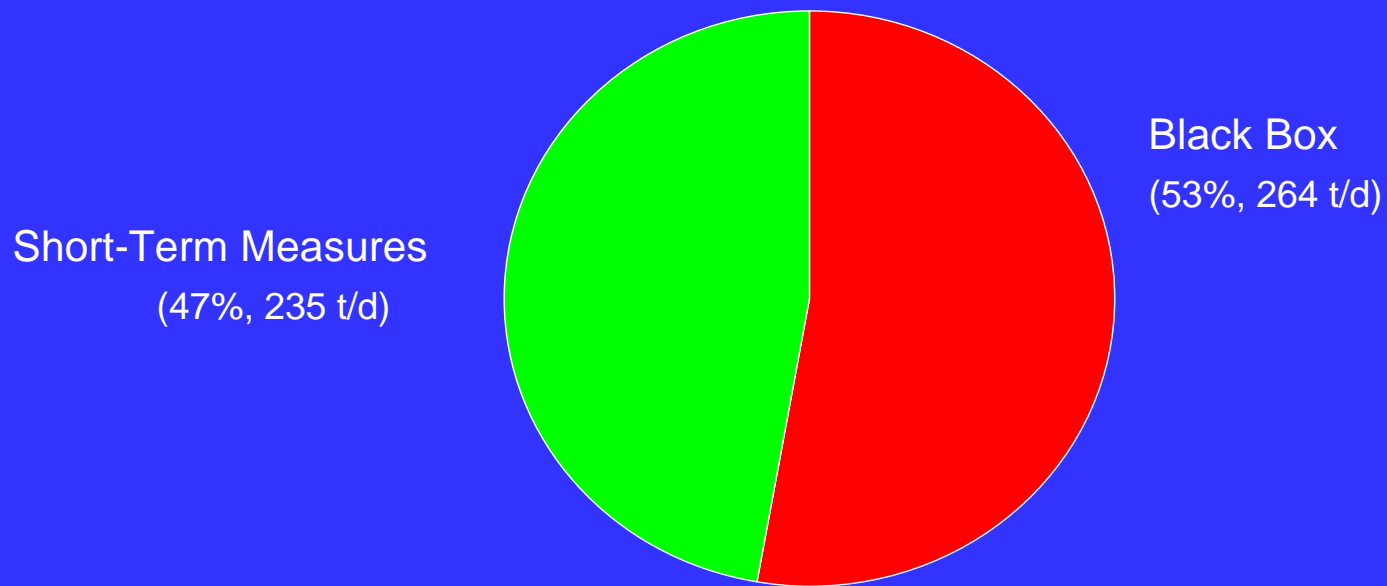
Aircraft LTO Projections



NOx Annual Average Emissions-2023



8-Hour Ozone Attainment Strategy



Total Reductions = 499 tpd

SUMMARY

- Significant reductions needed to meet the federal PM_{2.5} and 8-hr ozone ambient air quality standards in the Basin
- Aircraft represent a major and growing source of the emissions inventory
- Long-term emission reductions from all sources including aircraft are critical for demonstrating attainment